

Amendments to the Claims

1. (currently amended) In a disk-based data storage system, a method for synchronizing newly recorded data with previously recorded data, comprising:

measuring a first difference between a wobble reference signal and a read clock of previously recorded data;

writing test data on a test track to measure a second difference between the wobble reference signal and the test data, the test data written synchronous with a write clock;

determining a delay offset by comparing the first difference and the second difference using the wobble reference signal without requiring a measurement of a boundary delineating the individual bits of data, such that the appropriate delay offset is calculated utilizing only three measurements;
and

writing new data using the write clock and the delay offset such that the new data is synchronized with the previously recorded data.

2. (Original) The method of Claim 1 further including:

writing the test data to the test track with the delay offset set to zero;

reading the test data from the test track;

subtracting the first difference from the second difference to determine the delay offset for the write clock calibration delay.

3. (Original) The method of Claim 1 further including:

inserting the delay offset into a wobble-to-laser path to cause the new data to have a same epoch as the previously recorded data.

4. (previously presented) The method of Claim 1 further including:

the step of checking whether an error value is within predetermined limits, wherein the error value is the difference between the first difference and the second difference.

5. (Original) The method of Claim 4 further including:

adjusting the write clock in accordance with the error value, if the error value is outside the predetermined limits.

6. (currently amended) A disc based data storage system for editing old data on a disc media with new data, comprising:

means for measuring a first difference between a wobble reference signal and a read clock of previously recorded data;

means for writing test data on a test track to measure a second difference between the wobble reference signal and the test data, the test data written synchronous with a write clock;

means for determining a delay offset by comparing the first difference and the second difference using the wobble reference signal without requiring a measurement of a boundary delineating the individual bits of data, such that the appropriate delay offset is calculated utilizing only three signal measurements; and

means for writing new data using the write clock and the delay offset such that the new data is synchronized with the previously recorded data.

7. (Original) The system of Claim 6 wherein the means for writing test data on a test track to measure a second difference between the wobble reference signal and the test data, further comprises:

means for writing the test data to the test track with the delay offset set to zero;

means for reading the test data from the test track;

means for subtracting the first difference from the second difference to determine the delay offset for the write clock calibration delay.

8. (Original) The system of Claim 6 wherein the means for writing new data using the write clock and the delay offset such that the new data is synchronized with the old data further includes means for inserting the delay offset into a wobble-to-laser path to cause the new data to have a same epoch as the previously recorded data.

9. (Original) The system of Claim 6 further comprising means for checking whether an error value is within predetermined limits, wherein the error value is the difference between the first difference and the second difference.

10. (Original) The system of Claim 9 further comprising means for adjusting the write clock in accordance with the error value, if the error value is outside the predetermined limits.

11. (currently amended) A disc recorder for implementing a rewrite function for disc media having previously recorded data thereon, comprising:

a disc media having recorded thereon at least one track of previously recorded data; and

a disc reader/recorder device for implementing a method for performing synchronous rewrites onto the disc media, the method comprising:

a) measuring a first difference between a wobble reference signal of the disc media and a read clock of the previously recorded data;

b) writing test data on a test track to measure a second difference between the wobble reference signal and the test data, the test data written synchronous with a write clock;

c) determining a delay offset by comparing the first difference and the second difference using the wobble reference signal without requiring a measurement of a boundary delineating the individual bits of data, such that the appropriate delay offset is calculated utilizing only three signal measurements; and

d) writing new data using the write clock and the delay offset such that the new data is synchronized with the previously recorded data.

12. (Original) The device of Claim 11 wherein step b) further includes the steps of:

writing the test data to the test track with the delay offset set to zero;

reading the test data from the test track;

subtracting the first difference from the second difference to determine the delay offset for the write clock calibration delay.

13. (Original) The device of Claim 11 wherein step d) further includes the step of inserting the delay offset into a wobble-to-laser path to cause the new data to have a same epoch as the previously recorded data.

14. (Original) The device of Claim 11 further including the step of checking whether an error value is within predetermined limits, wherein the error value is the difference between the first difference from step a) and the second difference from step b).

15. (Original) The device of Claim 14 further including the step of adjusting the write clock in accordance with the error value, if the error value is outside the predetermined limits.

16. (new) In a disk-based data storage system, a method for synchronizing newly recorded data with previously recorded data without requiring the performance of measuring the boundary delineating the individual bits of data, said method being performed with three signal measurements comprising:

measuring a first difference between a wobble reference signal and a read clock of previously recorded data;

writing test data on a test track to measure a second difference between the wobble reference signal and the test data, the test data written synchronous with a write clock, wherein the test data is written to the test track with an initial delay offset set to zero;

reading the test data from the test track;

determining an appropriate delay offset by subtracting the first difference from the second difference to determine the appropriate delay offset for the write clock calibration delay without requiring a measurement of a boundary delineating the individual bits of data, such that the appropriate delay offset is calculated with three signal measurements; and

writing new data using the write clock and the appropriate delay offset such that the new data is synchronized with the previously recorded data.